

WHAT IS CLAIMED IS:

1. A device for exhaust gas after treatment of diesel engines, the device comprising:

one or more storage containers (1) configured to contain an urea solution and having a flexible wall;

a mixing area (13);

at least one compressed air conduit (15) connected to the mixing area (13) and configured to supply compressed air to the mixing area (13);

a pump (4) configured to convey the urea solution from the one or more storage containers (1) to the mixing area (13);

wherein the mixing area (13) is configured to form a mist of the urea solution and the compressed air.

2. The device according to claim 1, wherein the storage container (1) has a closure (5) having at least one first connector (2) and wherein the pump (4) comprises a pump line (3) connected to the at least one connector (2).

3. The device according to claim 2, wherein the at least one connector is a plug-in opening.

4. The device according to claim 2, wherein the closure (5) has a second connector (7) configured to receive an air supply conduit (8).

5. The device according to claim 4, wherein the second connector (7) is a plug-in opening.

6. The device according to claim 4, wherein the first and second connectors (2, 7) comprise a closure element.

7. The device according to claim 6, wherein the closure element is opened when placing the storage container (1) onto the pump line (3) or the air supply conduit (8), respectively.

8. A device for exhaust gas after treatment of diesel engines, the device comprising:

at least one storage container (1) configured to contain an urea solution;

a mixing area (13);

at least one compressed air conduit (15) connected to the mixing area (13) and configured to supply compressed air to the mixing area (13);

a pump (4) having at least one pump line (3) configured to convey the urea solution from the storage container (1) to the mixing area (13);

wherein the mixing area (13) is configured to form a mist of the urea solution and the compressed air;

wherein the at least one storage container (1) is configured to be plugged onto the at least one pump line (3).

9. The device according to claim 8, wherein the at least one pump line (3) comprises an on-off valve (9).

10. The device according to claim 8, wherein the at least one pump line

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18. The device according to claim 13, wherein each one of the air supply

conduits (8) comprises a float valve (10).

19. A device for exhaust gas after treatment of diesel engines, the device comprising:

one or more storage containers (1) configured to contain an urea solution;

a mixing area (13);

at least one compressed air conduit (15) connected to the mixing area (13) and configured to supply compressed air to the mixing area (13);

at least one urea conveying conduit (12) configured to convey the urea solution under the own weight of the urea solution from the one or more storage containers (1) to the mixing area (13);

wherein the mixing area (13) is configured to form a mist of the urea solution and the compressed air.

20. The device according to claim 19, wherein the urea conveying conduit (12) comprises a float valve (11).

21. The device according to claim 19, comprising a metering device (14) configured to control a flow volume of the urea solution flowing through the urea conveying conduit (12).

22. The device according to claim 19, comprising at least one air supply conduit (8) connected to the at least one storage container (1).

23. The device according to claim 22, wherein the air supply conduit (8)

comprises a float valve (10).

24. The device according to claim 22, wherein the air supply conduit (8) branches off the compressed air conduit (15).

25. The device according to claim 24, wherein the air supply conduit (8) comprises a pressure reducing valve (17).

26. The device according to claim 19, wherein the urea conveying conduit (12) comprises an on-off valve (9) for shutting off flow of the urea solution through the urea conveying conduit (12).

27. The device according to claim 19, further comprising a conveying main (12a) connected to the mixing area, wherein the urea conveying conduits (12) of the storage containers (1) are parallel connected to the conveying main (12a).

28. The device according to claim 27, further comprising a common air supply main (8a) connected to the storage containers (1).

29. The device according to claim 28, wherein the common air supply main (8a) comprises a pressure reducing valve (17).

30. The device according to claim 28, wherein the common air supply main (8a) branches off the compressed air conduit (15).

31. The device according to claim 27, wherein the urea conveying conduits (12) comprise an on-off valve (9), respectively.

32. A device for exhaust gas after treatment of diesel engines, the device comprising:

one or more storage containers (1) configured to contain an urea solution;

a mixing area (13);

at least one compressed air conduit (15) connected to the mixing area (13) and configured to supply compressed air to the mixing area (13);

at least one urea conveying conduit (12) configured to convey the urea solution from the one or more storage containers (1) to the mixing area (13);

wherein the mixing area (13) is configured to form a mist of the urea solution and the compressed air;

a pressure chamber (18) configured to receive the one or more storage containers (1);

at least one compressed air supply conduit (22) connected to the pressure chamber (18).

33. The device according to claim 32, wherein the at least one compressed air supply conduit (22) comprises a pressure reducing valve (17).

34. The device according to claim 32, wherein the compressed air supply conduit (22) branches off the compressed air conduit (15).

35. The device according to claim 32, wherein the storage container has a flexible wall.

36. The device according to claim 32, wherein the storage container (1) is configured to be plugged onto the urea conveying conduit (12).

37. The device according to claim 32, wherein the urea conveying conduit (12) comprises a float valve (11).

38. The device according to claim 32, comprising at least one metering device (14) configured to control a flow volume of the urea solution flowing through the urea conveying conduit (12).

39. The device according to claim 32, further comprising an urea conveying main connected to the mixing area, wherein the urea conveying conduits (12) of the storage containers (1) received in the pressure chamber (18) are parallel connected to the urea conveying main (12a).

40. The device according to claim 39, wherein the urea conveying conduits (12) comprise an on-off valve (9), respectively.

41. A device for exhaust gas after treatment of diesel engines, the device comprising:

one or more storage containers (1) configured to contain an urea solution;

a mixing area (13);

at least one compressed air conduit (15) connected to the mixing area (13) and configured to supply compressed air to the mixing area (13);

at least one urea conveying conduit (12) configured to convey the urea solution from the one or more storage containers (1) to the mixing area (13);

wherein the mixing area (13) is configured to form a mist of the urea

solution and the compressed air;

wherein the storage container (1) has a wall (23, 31) at least partially formed by a flexible pressure membrane.

42. The device according to claim 41, comprising a housing (19) wherein the storage container (1) is arranged in the housing (19).

43. The device according to claim 42, wherein the housing (19) has at least one fill socket (24).

44. The device according to claim 42, wherein the housing has at least one outlet socket (26).

45. The device according to claim 41, wherein the pressure membrane (23, 21) is configured to be elastically deformable by pressure loading.

46. The device according to claim 41, wherein the housing (19) comprises at least one compressed air supply conduit (22).

47. The device according to claim 46, wherein the compressed air supply conduit (22) comprises a pressure reducing valve (17).

48. The device according to claim 42, wherein the housing (19) has at least one heating device (29).

49. The device according to claim 48, wherein the heating device (29) projects into the urea solution.

50. The device according to claim 42, wherein the pressure membrane (31) is a folded bellows.